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BAILEY SITE REPORT

18 November 2010

To: Mary Koks, Satya Sinha

From: Julie Larson

Subject: Bailey Site Conditions – 30 September 2010

This report summarizes our visual observations of conditions associated with the Bailey Superfund Site made 30 September 2010.

Julie Larson and Dave Adkison, from Parsons, conducted a walk-through of the site on September 30, 2010, to assess the site conditions at Bailey and address the issues and recommendations contained in the EPA 5-year report distributed in August 2010.

The following is a list of issues noted in the EPA 5-year review and Parsons proposed path forward for each item:

Bridge

According to the EPA 5-year review report, "the landowner is concerned about the integrity of the bridge due to noted saltwater on the "I" beams and rusting around the support structure of the bridge."

While on site, Parsons' visual inspection indicated that the wood decking, hand rails, approaches, and bridge steel structure are in good condition (see attached Inspection Check List). Parsons also took photographs of the bridge supports and compared the photos to past photos. Whereas, it appears that the rusting is only a surficial issue, Parsons will include a bridge inspection and repainting activities into the 2011 O&M budget. The bridge inspection will assess the structural integrity of the bridge, and if there are structural issues associated with the bridge, we will recommend appropriate corrective measures. The following photographs document the bridge supports in 2002 (pre-hurricane), 2008 (post hurricane Ike), and in September 2010.

Bridge Supports (2002) – view looking southwest

Bridge Supports (2008 Post Hurricane Ike) – view looking southwest

Bridge Supports (2010) – view looking southwest

Bridge Supports (2008 Post Hurricane Ike) – view looking northwest

Bridge Supports (2010) – view looking northwest

When observing the bridge handrail system, it was noted that the handrails on both sides of the bridge appear to be intact. The rusting issue appears to be surficial in nature. Parsons recommends confirming this during a bridge inspection. For budgeting purposes, we propose repainting the steel structural members and the handrail. If additional measures result from the bridge inspection, we will develop a cost estimate and obtain authorization prior to implementation.

Fence

The EPA 5-year report noted that the "fencing located to the north of the main entrance gate has been corroded and the integrity has been compromised." Parsons has noted this corrosion during previous inspections and confirms that the integrity of that portion of the fence has been compromised. Parsons proposes to replace this portion of the fence during the end of budget year 2010 or first quarter 2011, as a function of weather and subcontractor availability.

Fence panel over water channel at access bridge.

It should also be noted that the gate access along the back side of the property (on the East Dike Cap) is not secured. Parsons observed a chain and lock present for the gate; however, the gate is currently secured with a chain and clasp system (see following photograph). Parsons is of the opinion that this does not provide adequate security for that back gate. If BSSC agrees, Parsons recommends that BSSC contact the property owner to discuss gate security needs and appropriate measures required. A replacement chain and lock can be installed upon approval. Parsons can facilitate the discussion with the property owner, as needed.

East Dike Cap back gate locking mechanism.

North Dike Cap:

- Animal Burrows – Abandoned animal burrows were noted along the North Dike Cap. Parsons will have the subcontractor fill in the animal burrows during the next mow/weed event.
- Riprap – There are a couple of issues regarding the North Dike Cap riprap. One is vegetation growth in the riprap (see below example photo). This issue will be addressed during the planned upcoming site mowing event.

Vegetation growth in riprap along North Dike Cap – view looking east toward Highway 87.

The second issue is exposed geotextile material along the northwest corner of the North Dike Cap. The EPA 5-year review report noted that areas of exposed geotextile fabric, should be "inspected for integrity." While on site, Parsons inspected the exposed material and confirmed that it is part of the riprap slope armament protection system. It is not connected to the cap liner in any way and therefore poses no immediate threat to the integrity of the cap containment system (see photos).

Slag shifted by hand to determine geotextile material placement.

Geotextile material placed under riprap and additional material curls back over riprap.

Parsons interprets that the condition resulting in the geotextile material being exposed relates to down slope shifting of slag materials that has occurred slowly over the past 13 years. Parsons recommends that slag material be added along areas of the North Dike Cap where riprap base geotextile is exposed.

- Signs – There are a number of signs along the North Dike Cap perimeter that Parsons recommends to be repaired, replaced, or re-aligned. The main condition responsible for degradation of sign integrity appears to be corrosion of the sign posts at the water level. Parsons is in the process of identifying recommended means and method to repair/replace the signs to minimize potential future impact to sign integrity due to corrosion. Upon BSSC approval of our recommended method, Parsons will proceed with the sign repair/replacement activity.

Sign along in water channel along north side of North Dike Cap.

Sign in water channel on south side of North Dike Cap.

- Erosion – There is one area where the erosion is noted (per photos). Parsons recommends that this area of erosion be controlled by use of additional seeding for regrowth in addition to hay bales to reduce the amount of erosion while the vegetation takes root. This method has been successfully used before at the Bailey Site.

North Dike Cap – Erosion along riprap on northwest side of cap

- Desiccation – Desiccation cracks were noted on the North Dike Cap during the on site visit. The EPA 5-year review report also noted desiccation cracks on both the North Dike Cap and East Dike Cap. The presence of desiccation cracks are interpreted as a result of the lower than average rainfall amounts during the previous 10 months. At this time, we do not anticipate that the desiccation cracks are problematic nor long-term. Parsons will continue to monitor both caps to determine if they pose an issue with the underlying cap liner.

East Dike Cap

- Animal Burrows - Abandoned animal burrows were noted along the East Dike Cap. Parsons will have the animal burrows filled during a mow/weed event.
- Riprap – There is vegetative growth in the riprap along the East Dike Cap. This issue will be addressed during the upcoming planned site mow/weed event.

Vegetation growth in riprap along East Dike Cap – view looking south toward Port Arthur.

- Settlement/Rutting – The area of settlement associated with the East Dike Cap (between the 3rd and 4th gas vent) has been previously noted by Parsons during routine inspections. The EPA 5-year review report also notes the area of settlement as an area of concern. Parsons concluded at the end of calendar year 2009, that the area of settlement should be addressed by fill placement in the area to regrade the area to alleviate the ponding issue. Parsons is currently conducting additional research on the liner to determine if the integrity of the liner has been compromised due to the settlement. Upon conclusion of this additional research, Parsons will propose a path forward to recommend to BSSC to address the settlement area.
- Desiccation – See discussion under North Dike Cap.

Conclusion and Recommendations

The following activities are currently planned for implementation during year 2010, as approved by BSSC:

1. Cap surface vegetation mowing and cap slope vegetation weeding.
2. Fill abandoned animal burrows.
3. Replace fencing north of the main entrance gate.
4. Address back gate security needs.
5. Inspect site access entrance bridge.

The following activities are recommended to address in the 2011 budgetary cost estimate for implementation during the year 2011:

1. Bridge repair/maintenance issues stemming from the bridge inspection.
2. Placement of additional topsoil and vegetation to address the East Dike Cap settlement area.
3. Re-adjust/add slag materials along areas of the North Dike Cap where riprap base geotextile is exposed.